BIBLIOGRAPHICAL RECORD.

Authors and societies are requested to forward their works to the editors as soon as published. The date of publication, given in brackets [], marks the time at which the work was received, unless an earlier date of publication is known to recorder or editor. Unless otherwise stated each record is made directly from the work that is noticed.

A colon after initial designates the most common given name, as: A: Augustus; B: Benjamin; C: Charles; D: David; E: Edward; F: Frederic; G: George; H: Henry; I: Isaac; J: John; K: Karl; L: Louis; M: Mark; N: Nicholas; O: Otto; P: Peter; R: Richard: S: Samuel; T: Thomas; W: William. The initials at the end of each record, or note, are those of the recorder.

Corrections of errors and notices of omissions are solicited.

Claypole, E: Waller. The scientific names of insects. (Can. entom., April 1879, v. 11, p. 61-64.)

Crit. rev. of G: D. Hulst's article with same title (Can. entom., Feb. 1879, v. 11, p. 22-23) [Rec., 2920]. Hulst's statement that "A feminine name must not be joined to a masculine noun" is attacked, and citations from classical Latin authors and of the usage of the Latin and Romance languages are given to show that "We have therefore abundant classical authority for linking nouns of different genders in apposition in the same name."

G: D. (2907)

Devereaux, Willard Loomis. Captures of noctuidae at Clyde. Wayne co., N. Y. (Can. entom., June 1879, v. 11, p. 105-110.)

(Can. entom., June 1079, V. 11, p. 12).

List of noctuidae, principally taken at sugar, with notes as regards rarity and date of capture; to this is added a list of coleoptera seen at sugar, and it is noted that hyla versicolor and bufo americanus attend the bait to capture insects.

G: D. (2708)

Edwards, W: H: [Correction.] (Can. entom., Apr. 1879, v. 11, p. 79-80.)

Correction of the author's "Descriptions of new species of butterflies collected by Mr. H. K. Morrison"
... [Rec. 2910]. G: D. (2909)

Edwards, W: H: Descriptions of new species of butterflies collected by Mr. H. K. Morrison, in Nevada, 1878; also, Remarks on some errors of synonymy and arrangement. (Can. entom., March 1879, v. 11, p. 49-56.)

Correction, by W: H: Edwards. (Can. entom., Apr. 1879, v. 11, p. 79-80.)

entom.. Apr. 1079, v. 11, p. 17

Describes three new species of butterflies, argynnis laura, satyrus paulus, and pholisora oricus, alt from Nevada; notes on the synonymy and grouping of certain North American species of argynnis.

G: D. (2010)

Edwards, W: H: Descriptions of new species of North American butterflies; also, Notes upon certain species. (Can. entom., May 1879, v. 11, p. 81-89.)

Describes argynnis hippolyta (Oreg. and Cal.), a. chitone (Utah and Ariz.), and anthocharis stella (Nev. and Cal.). 3 n. sp. of diurnal lepidoptera; gives synonymical and descriptive notes on argynnis nitocris, papilio bairdii, p. asteroides (Reakirt, nec Strecker) and on anthocharis thoosa.

G: D. (2911)

Edwards, W: H: Notes upon the preparatory stages of certain species of butterflies. No. 1. (Can. entom., July 1879. v. 11. p. 127-131.)

Describes larva and chrysalis of *eresia tevana*, the chrysalis of *phyciodes vesta*, and the egg, larva and chrysalis of *melitaea baroni*; directions how to pack eggs and larvae of butterflies for sending by mail. *G: D.* (2912)

Grey, Robert Melrose. Remarks, critical and suggestive, on the genus *limenitis* east of the Mississippi. (Can. entom., Jan. 1879, v. 11. p. 16-17.)

Rev., by A: R. Grote. (Can. entom., Feb. 1879, v. 11, p. 40.) [Rec., 2917.]

Believes that *limenitis ursula*, *l. disippus*, and *l. proserpina* "are plastic forms of one species"; notes on colorational variations sometimes occurring in the first two species. *G. D.* (2013)

Grote, A: Radcliffe. [Bibliographical record of Psyche.] (Can. entom., Apr. 1879. v. 11, p. 79.)

Objects "to the interjectional criticisms in the Bibliographical record of Psyche," with especial reference to the note of Rec. 1101, and adds, "In the present case the criticism is essentially hasty and bad, but, if my friendly advice to avoid such matters in future be taken, I think it will not prove entirely unfortunate for the publishers of Psyche."

— G: D. (2914)

Grote, A: Radcliffe. Descriptions of two species of agrotis, and two of apatela. (Can. entom., March 1879, v. 11, p. 56-59.) Describes, as new species, agrotis vocalis, a. vernilis, and apatela parallela, from Colorado, and apatela distans, from Canada. G: D. (2915)

Grote, A: Radcliffe. On graphiphora and new N. Am. noctuidae. (Can. entom...

Feb. 1879, v. 11, p. 26-29.)

Transfers to graphiphora some species hitherto considered to belong to mamestra, dianthoccia, himella, and acerra; describes three new species, g. garmani (from Ill.), g. perbrunnea and heliophila dia (both from

Grote, A: Radcliffe [On limenitis.] (Can. entom., Feb. 1879, v. 11, p. 40.)

The author regards the intermediate forms of the species of *limenilis* mentioned in R. M. Grey's "Remarks, critical and suggestive, on the genus *limenilis* east of the Mississippi" (Can. entom., Jan. 1879, v. 11, p. 16-17) [Rec., 2913], as "in an intermediate position between varieties and species."

G: D. (2917)

Harrington, W : Hague. [Notes on insects.] (Can. entom., June 1879, v. 11, p. 119-120.)

Notes rarity of lepidoptera about Ottawa, Canada, in the early part of 1879; notes on bufrestidae, on species of monohammus, and on epicanta cinerea, chelymorpha cribraria and cicindela longilabris. G: D. (2918)

Hulst, G: Duryea. [Correction.] entom., Apr. 1879, v. 11, p. 80.)

Correction of the author's "The scientific names of insects" (op. cil., Feb. 1879, p. 22-25) [Rec., 2920].

G: D. (2919)

Hulst, G: Durvea. The scientific names of insects. (Can. entom., Feb. 1879, v. 11, p. 22-25.)

Crit. rev., by E: W. Claypole, with same title. (Can. entom., Apr. 1879, v. 11, p.

61-64.)

Correction, by G: D. Hulst. (Can. en-

tom., Apr. 1879, v. 11, p. 80.)

An appeal to entomologists to use more correct An appeal to chromologists to assume that in constructing scientific names of insects, and numerous names chosen to illustrate the different points discussed. G: D. (2920)

Imhof, Othmar Emil. Beiträge zur Anatomie der perla maxima Scopoli. Inaugural-dissertation... Universität Zürich. Aaran, 1881. t.-p. cover, 41 p., 2 double pl., 23 × 16, t 16.5 × 10.4. Notice, by H. A. Hagen, (Zool, Jahresber,

f. 1881, 1882, Abtheil, 2, p. 126.)

Anatomy of the central nervous system, digestive tract and sexual system of $ferla\ maxima$, with especial notice of the egg and its structure. $G:\ D.\ (2921)$

Kaltenbach, J. H. Die Pflanzenfeinde aus der Klasse der Insekten. Ein nach Pflanzenfamilien geordnetes Handbuch sämmtlicher auf den einheimischen Pflanzen bisher beobachteten Insekten zum Gebrauch für Entomologen, Insektensammler, Botaniker, Land- und Forstwirthe und Gartenfreunde. Stuttgart, Julius Hoffmann, 1874. t.-p. cover [dated 1872], 2 t.-p. [= p. 1-4] + p. 5-8 + 848 p., 402 figs. of plants.

Rev., by A. Müller, entitled "Moritz Isenschmid's Zusätze.".. (Mitth. Schweiz. entom. Gesells., 1880, bd. 5, p. 575-576.)

[Rec. 1761.]

[Rec. 1761.]

Contents: Preface, p. 1-4; list of insects found upon different native phaenogamous plants of Germany arranged in the order of the plants, with notes about the insects and often figures of the plants, p. 1-768; additions, p. 769-793; alphabetical indexes (Latin names of plants, German names of plants, genera and species of coleoptera, species of leptoptera, genera and species of hymenoptera, genera and species of diptera, genera and species of hemiptera, genera and species of nemiptera, genera and species of acarina), p. 794-846; crrata, p. 847-848. Many of the insects mentioned are also found in North America.

G: D. (2922)

Kellicott, D: Simons. Observations on nephopterix [sic] zimmermani. (Can. entom., June 1879, v. 11, p.114-116.)

Notes on the habitats, habits and parasites of nepho-C: D. (2923) pteryx zimmermani.

Lintner, Joseph Albert. Description of a new species of anisota. (Can. entom.. Jan. 1879, v. 11, p. 10-12.)

Describes anisota bisecta n. sp., from Racine, Wisc. G: D. (2924)

MacLeod, Jules. Notice sur l'appareil venimeux des aranéides. (Arch. de biol., 1880, v.1, p. 573-582, pl. 24.) Separate. [Gand, 1880.] t.-p. cover. 10

p., pl. 24, 24 \times 16, t 17 \times 9.7. Abstract, entitled, "The poison apparatus of spiders." Amer. nat., March [24 Feb.] 1881. v. 15, p. 236.) Abstract. (Zool. Jahresber. f. 1880. 1881.

abth. 2, p. 69.) Abstract. (Bericht... der Entomologie

... 1880, 1882, p. 58.)

Anatomy and histology of poison-glands of spiders, illustrated by those of pachygnatha, marpissa, legenaria, clubiona, and agelena. G: D. (2925) clubiona, and agelena.

Patton, W: Hampton. On certain hymenoptera. (Can. entom., Jan. 1879, v. 11, p. 12-15.)

Allantus basilaris devours other insects; compares its habits with those of other predaceous saw-flies as observed in Europe; resemblance of mandibles of allanobserved in Europe, resemblance or managers that to those of ciendela; distinguishing characters of a basilaris and a debius; description of tenule of xiphydria attenuata and a note on its parasite, thus humida.

G. D. (2026) Patton, W: Hampton. Descriptions of several new proctotrupidae and chrysididae. (Can. entom., Apr. 1879, v. 11, p. 64-68, fig. 13.)

Describes five new species of hymenoptera, as follows: Describes two new species of hymenopiera, as nonowa-proctotrupes cremidatus, gonatojus contortulus, notozus marginatus, chrysis verticalis (all from Conn.), ch. mar-tia (from Canada), and cleptes aliena (from Wyom.). G; D. (2027)

Patton, W: Hampton. Notes on three species of xylocopa. (Can. entom., March 1879, v. 11, p. 60.)

Gives synonymy of xylocopa micans; describes x. varipuncta, a new species from Arizona, and notes that x. fimbriata has been found in California.

G: D. (292S)

Pott, Karl Friedrich Robert. Vergleichende Untersuchung über die Mengenverhältnisse der durch Respiration und Perspiration ausgeschiedenen Kohlensäure bei verschiedenen Thierspecies in gleichen Zeiträumen nebst einigen Versuchen über Kohlensäureausscheidung desselben Thieres unter verschiedenen physiologischen Bedingungen. Habilitationsschrift...Universität Jena. Jena, 1875. t.-p., dedic. p., 88 p., 22 × 14, t 16

Experimentson the amount of carbonic dioxide [CO2] Experiments on the amount of carbonic dioxide [CO2] exhalted by different animals; p. 30-38, 43-44, 50-52, and 73-78 contain accounts of experiments on insects, of which the author experimented upon larvue of geotrupes vernalis, carabus, pieris brassicae, sphinx ligustri, cossus ligniferad and enprepia caja; pupa of sphinx ligustri; and imagos of vanessa polychloros, locusta viridissima, other species of locustariae, gryllus campestris and pentatoma. [The notes given in Psyche, Mar.-Apr. (24 Sept.) 1878, v. 2, p. 125-126, are from accounts of the same series of experiments.]

G: D. (2920)

Reichenau, Wilhelm. Beiträge zur Biologie und Psychologie. 1. Ueber die Erscheinungen individueller und ererbter Erfahrung. (Entom. Nachrichten. 1 April 1879, Jahrg. 5, p. 93-95.)

Exemplification of results of supposed hereditary ex perience in insects contrasted with results of experience of individual insects.

G: D. (2930)

Reichenau, Wilhelm. Beiträge zur Biologie und Psychologie. 2. Vermischtes: Witterungs- oder Bodeneinfluss. Ueberwinterung und Mordraupen bei Schmetterlingen. (Entom. Nachrichten. 1 June 1879, Jahrg. 5, p. 137-139.)

Yriations of coloration due to temperature and moisture in boarmia crepnscularia, hibernia leucophaearia, aglia tau, pararge megaera and pieris rapae; hiberniation of brotolomia meticulosa and macroglossa stellatarum, often between books in the library of the museum at Mainz; copulation, in early spring, of lepidoptera that have hibernated; various lepidopterous larvae that kill and eat larvae of their own or other species.

Saunders, W: E. [Papilio thoas.] (Can. entom., June 1879, v. 11, p. 120.)

Notes the occurrence of papilio thoas at Toronto, Canada, 11 May 1879, and thinks this early appearance of the butterfly indicates that it is double-brooded there.

Siewers, C: Godfrey. The tails of callimorpha interruptomarginata 3. (Can. entom., March 1879, v. 11, p. 47-48, fig. 12.)

Brief description of a pair of evaginable bairy appendages, one on each side, near the anus of the male of callimorpha interruptomarginata; literature of some similar organs in other lepidoptera; regards them as aiding in flight.

G: D. (2933)

Sprague, Frank Headley. Notes from Wollaston, Mass. (Can. entom., March 1879. v. 11, p. 46-47.)

Reprint. (op. cit., May 1880, v. 12. p. 100.) [Rec., 2004.]

Records captures of colias eurytheme, limenitis arthe-G: D. (2934) mis and junonia coenia.

Wailly, Alfred. Silk-producing and other bombyces reared in 1881. Part 2. (Journ. soc. arts, 31 March 1882, v. 30, p. 527-528, 54 cm.)

Reprinted in a separate entitled "Silk-producing bombyces and other lepidoptera reared in 1881" [Rec., 2038],

bith one for votes.

G: D. (2035) which see for notes.

Wailly, Alfred. Silk-producing and other bombrees reared in 1881. Part 3 (Journ. soc. arts. 7 Apr. 1882, v. 30, p. 544-546, 94 cm.)

Reprinted in a separate entitled "Silk-producing bombyees and other lepidoptera reared in 1881" [Rec., 2938].

G: D. (2930) which see for notes.

Wailly, Alfred. Silk-producing bombyces and other lepidoptera reared in 1881. [Part 1.] (Journ. soc. arts, 10 Mar. 1882, v. 30, p. 447-450, 122 cm.)

Reprinted in a separate of the same title [Rec., 2038], which see for notes.

G: D. (2937)

Wailly, Alfred. Silk-producing bombyces and other lepidoptera reared in 1881. London, 1882. 8 p.. 26 × 17. t (in 2 cols.)

Reprint of author's "Silk-producing bombyees and other lepidoptera reared in 1881". Part [1-] 3 (Journ. soc. arts, 1882, v. 30:10 Mch., p. 447-450 [Rec., 2937]; 31 Mch., p. 527-528 [Rec., 2935]). Contains biological notes on many species of 2936]). Contains biological notes on many species of attacus, their larvae, duration of pupal state, food-plants, crossings, hybrids, silk, etc. Notes are given on the following North American species of bombycidae: telea polyphemus, samia gloveri, s. cecropia, s. ceanothi, hybrid larvae of s. cecropia and s. gloveri, hyperchiria io, orgyia leucostigma, and ceratocampa (eacles) imperialis.

G: D. (2938)

Weber, Max. Ueber eine Cyanwasserstoffsäure bereitende Drüse. (Archiv f. mikros. Anat., 1882, bd. 21, heft 3, p. 468-475, pl. Notice.

(Psyche, Aug. 1882 [15 Jan.

1883], v. 3. p. 583. 2 cm.)

The secretion of the glands in connection with the foramina repugnatoria of a species of myriapod, genus fontaria, contains hydrocyanic acid (HCN).

Wolff, R. Ueber die umwandlung des Can-tharidins in den Canthariden. (Archiv der Pharm., Jan. 1877. jahrg. 56, bd. 210. 3te reihe, bd. 10, p. 22-30.)

Engl. abst. (New remedies, Apr. 1877.

v. 6, p. 113.)

Experiments on the changes undergone by cantharidin in lytta aspersa when moisture is present; these changes attributed to presence of ammonia, since moisture alone does not alter cantharidin; results of some study of the properties of nitrogen-compounds of can-

Bibliographical Record of Contents of Volume three of Psyche.

Advertisements see names of respective advertisers.

Austin, E: Payson. Natural history agency. Psyche, Jan.-Oct. 1880. v. 3, p. 12, 24, 26, 50, 62, 74, 86, 98, 110, 122, each 4 cm.)

Barnes, W:, secretary pro tem., see Cambridge entomological club [Rec. 2955].

Bibliographical record, see [Mann, B: Pickman, ed.] Bibliographical record [Rec., 3050].

Bowles, G: 11., secretary, see Entomological so ciety of Ontario: Montreal branch [Rec., 3030].

[Brooklyn entomological society.] For sale. (Psyche, May [9 July] 1880, v. 3, p. 72. 3 cm.)

Advertisement of J. L. Leconte's "Synopsis of the N. A. species of platynus"... for sale.

B: P. M. (2942)

Eurgess, E: Recent studies in insect anatomy. Third annual address of the president. (Psyche, Mar. [1 May] 1880, v. 3. p. 27-43. 568 cm.)

Notice. (Amer. entom.. June 1880. v. 3, n. s., v. 1, p. 147, 3 cm.)

Address delivered 9 Jan. 1880, as retiring president of the Cambridge entomological club, giving a review of the works relating to insect anatomy and physiology, published during 1878 and 1879. G: D. (2943)

[Cambridge entomological club.] Acknowledgments. (Psyche, 1880, v. 3:[22] Jan., p. 2, 4 cm.: Feb. [6 Mch.], p. 14, 3 cm.)

Acknowledgments of receipts of contributions to permanent publication fund of Psyche. G: D. (2944)

Cambridge entomological club. Feb. [6 Mch.] 1880, v. 3. p. 20, 18 cm.)

Minutes of annual and monthly meeting of Cambridge entomological club, 9 Jan. 1880, by the secretary (B: P. Mann); annual reports for 1870; election of officers for 1880. (2945)

Cambridge entomological club. (Psyche, June [13 Aug.] 1880. v. 3, p. 77, 27 cm.)

Minutes of monthly meetings of Cambridge entomological club, Feb. June 1880, by the secretary (B: P. Mann); abstract of communications made.

B: P. M. (2945)

Cambridge entomological club. (Psyche, Dec. 1880 [13 May 1881], v. 3. p. 150. 6 cm.)

Minutes of monthly meeting of Cambridge entomological club, S Oct. 1880, by the secretary (B: P. Mann); occurronce of an undetermined household pest neur Boston (by H. A. Hagen). B: P. M. (2947)

Cambridge entomological club. (Psyche, Jan. [27 June] 1881, v. 3, p. 162, 26 cm.)

Minutes of monthly meeting of Cambridge entomological club, 12 Nov. 1880, [by the secretary (B: P. Mann)]; election of members; abstract of communications made.

B: P. M. (2948)

Cambridge entomological club. (Psyche, Mch. [25 July] 1881, v. 3, p. 186, 16 cm.)

Minutes of monthly meeting of Cambridge entomological club, to Dec. 1880 [by the secretary (B: P. Mann;]; abstract of communications made. B: P. M. (2949)

Cambridge entomological club. (Psyche. Jul.-Sep. 1881 [7 Mch. 1882], v. 3, p. 245.

Minutes of annual and monthly meeting of Cambridge entomological club, 14 Jan. 1881, and in part of monthly meeting, 11 Feb. 1881 [by the secretary (B: P. Mann)]; annual reports for 1880; election of officers for 1881; election of members; notice of death of E. C: Prentiss.

B: P. M. (2050)

Cambridge entomological club. (Psyche, Oct.-Dec. 1881 [7 Apr. 1882], v. 3, p. 277-279, 86 cm.)

Minutes of monthly meetings of Cambridge entomological club, Feb.-May and Oct.-Dec. 1881, by the secretaries (B: P. Mann and W: Trelease); abstract of communications made; election of W: Trelease as secretary.

B: P. M. (2951)

Cambridge entomological club. (Psyche, Mch.-Apr. [24 June] 1882, v. 3, p. 328, 24 cm.)

Minutes of monthly meeting of Cambridge entomological club, 9 Dec. 1881 (concluded), and of annual and monthly meeting, 13 Jan. 1882 [by the secretary (W. Trelense]]; abstract of communications made; clection of officers for 1882; thanks voted to B: P. Mann for services as secretary and treasurer.

B: P. M. (2952)

Cambridge entomological club. (Psyche, July [16 Dec.] 1882, v. 3, p. 369, 17 cm.)

Minutes of monthly meetings of Cambridge entomological club, 10 Feb. and 10 Mch. 1882 [by the secretary (W: Trelease)]; abstract of communications made; A. P. Chadbourne elected a member; constitution and by-laws amended.

B: P. M. (2953)

Cambridge entomological club. (Psyche, Sept.-Oct. 1882 [1 Mch. 1884], v. 3, p. 402, 14 cm.)

Minutes of monthly meeting of Cambridge entomological club, 14 Apr. 1882 [by the secretary fro tem. (R. Hayward)]: abstract of communications made.

B: P. M. (2954)

Cambridge entomological club. (Psyche, Nov.-Dec. 1882 [—1885], v. 3, p. 414-417, 210 cm.)

Minutes of monthly meetings of Cambridge entomological club, May and Oct. Dec. 1882 [by the secretary fro tem. for May (W: Barnes) and the secretary (G: Dimmock)]; abstract of communications made.

B: P. M (2955)

Chambers, Vactor Tousey. Further notes on some tineid larvae. (Psyche, Nov. 1880 [22 Mar. 1881], v. 3, p. 135-137, 98 cm.: Dec. 1880 [13 May 1881], v. 3, p. 147-149, 96 cm.)

Extract, with notice. by S: Lockwood, entitled, "Mussel and insect climbers," (Amer. nat., Sept. [23 Aug.] 1881, v. 15, p. 727.)

Notes on the life-history of species belonging to the genera phyllocnistis, nepticula, aspidisca and antispila.

G: D. (2956)

Chambers, Vactor Tousey. Nepticula pteliaeclla. n. sp. (Psyche, Oct.-Dec. 1881 [7 Apr. 1882], v. 3. p. 276, 23 cm.)

Describes nepticula pteliaeella n. sp., of which the larval history was given in author's "Further notes on some tineid larvae" (Psyche, Nov. Dec. 1880, v. 3, p. 137, 147) [Rec., 2956].

G: D. (2957)

Chambers, Vactor Tousey. Notes upon some tineid larvae. (Psyche, May [9 July] 1880, v. 3, p. 63-68, 177 cm., fig.)

Descriptions of the life-history of several species of tineidae.

G: D. (2958)

Claypole, E: Waller. On a larva boring the leaf-stalks of the buckeye, *aesculus glabra*, in Ohio. (Psyche, July [16 Dec.] 1882, v. 3, p. 364-367, 110 cm.)

Life-history of steganoptycha claypoleana and comparison of its habits with those of proteoteras aesculanum.

G: D. (2959)

Comstock, J: H: Coccidae wanted. (Psyche, 1880-1882, v. 3, p. 120, 132, 144, 156, 168, 180, 192, 204, 216, 228, 260, 292, 304, 316, 336, 348, 350, 362, 374, 386, each 4 cm.) Advertisement. B: P. M. (2960)

Cook, Albert J: Foreign honey bees. (Psyche, Apr. [18 Aug.] 1881, v. 3. p. 197-198, 56 cm.)

Notes on honey-bees of Cyprus, Syria, Cevlon, and Java. G: D. (2961)

Cook, Albert J: Insects in winter. (Psyche, March [25 July] 1881, v. 3, p. 183-185, 103 cm.)

Discussion of hibernation in insects, and especially of the physiological condition of honey-bees (apis mellifica) in winter.

G: D. (2962)

Corrections. (Psyche, Dec. 1880 [13 May 1881], v. 3, p. 155, 35 cm.)

Corrections of errors detected in *Psyche* for Jan.-Nov. 1880, v. 3, p. 1-144. *B: P. M.* (2963)

Dimmock, Anna Katherina [Hofmann], wife of G: Asymmetry of the nervous system in the larva of harpyia. (Psyche, May [19 Aug.] 1882, v. 3, p. 340-341, 51 cm., fig. 6.)

Notice, by Paul Mayer. (Zool. Jahresber. f. 1882, 1883, abtheil. 2, p. 145.)

Abstr. (Journ. Roy. micros. soc., Feb. 1883, s. 2, v. 3, p. 46-47.)

Shows that the commissures connecting the first and second thoracic ganglia of harpyia vinula are partly united, and turn to the left to avoid the duct of a gland; figures these parts.

B: P. M. (2964)

Alphabetic index to names of genera and species contained in volume 3 of *Psyche*. B: P. M. (2965)

Dimmock, G: Anatomy of the mouth parts and of the suctorial apparatus of *culcu*. (Psyche, July-Sept. 1881 [7 March 1882], v. 3, p. 231-241, 347 cm., pl. 1, with [1 p.] expl. of pl.)

expl. of pl.)

Rev., by J: T. C[arrington], entitled "Entomological anatomy." (Entomological anatomy.")

gist, April 1882, v. 15, p. 96.)

Brief history of the subject; descriptions and figures of the mouth-parts, fulcrum and oesophageal sucking apparatus of *culex*; how *culex* bites. Extracted, with additions and changes, from author's "The anatomy of the mouth-parts and of the sucking apparatus of some diptera. Dissertation"...1881. B: P. M. (2966)

Dimmock, G: Announcement. (Psyche, [22] Jan. 1880, v. 3, p. 7, 2 cm.)

Announces the proposed publication, in the Bibliographical record [Rec., 3050], of a list of notices of entomologists who died during 1879. B: P. M. (2967)

Dimmock, G: Book notice. (Psyche, June [13 Oct.] 1882, v. 3, p. 354, 4 cm.)

Notice of the reprint of S: II. Scudder's "Fragments Notice of the reprint of S: 11. Scuader s Pragment. the coarser anatomy of diurnal lepidoptera"... B: P. M. (2968) [Rec., 3086].

Dimmock, G: Book notice. (Psyche, Aug. 1882 [15 Jan. 1883]. v. 3, p. 381, 9 cm.)

Notice of W. H. Müller's "Proterandrie der Bienen" Rec., 2801. B: P. M. (2969) [Rec., 2891].

Dimmock, G: Circulation of blood in the larva of hydrophilus. (Psyche, Mar.-Apr. [24 June] 1882, v. 3, p. 324-326, 84 cm., fig. 5.)

Notice, by Paul Mayer. (Zool, Jahresber. f. 1882, 1883, abtheil. 2, p. 136.)

Describes and indicates on a figure the direction of the blood-currents in the head, antennae and trophi of hydrophilus.

B: P. M. (2970)

Dimmock, G: The cocoons of cionus scrophulariae. (Psyche, Nov.-Dec. 1882 [-1885], v. 3. p. 411-412, 80 cm.)

Notes on the structure of the cocoon of cionus scro-dulariae. B: P. M. (2971) phulariae.

Dimmock, G: Defensive mimicry in phalangidae. (Psyche, Jan. [29 Apr.] 1882. v. 3, p. 299, 34 cm.)

A species of *phalangidae* imitates a spider's web with spider in it.

B: P. M. (2972) a spider in it.

Dimmock, G: Editorial. (Psycholar Oct.] 1882, v. 3, p. 354, 23 cm.) (Psyche, June

Explanation of circumstances attending the editing and publication of *Psyche*, v. 3, up to the present time; acknowledgments of cooperation, especially of E. C; Prentiss and B: P. Mann, in these labors; statement of relative contents of this volume compared with the previous ones; urges the increase of the publication fund.

B: P. M. (2973)

Dimmock G: Editorial notice. (Psyche, Nov.-Dec. 1882 [----- 1885], v. 3, p. 414,

Notice of the contents of volume three of Psyche, and Notice of the contents of volume when it is completed. the change in price of that volume when it is completed. G: D. (2974)

Dimmock, G: On a habit of scolopendra morsitans. (Psyche, Aug. 1882 [15 Jan. 1883], v. 3, p. 380, 23 cm.)

Describes the manner in which scolopendra morsitans Describes the manner in which works with its mouth-parts upon wounds made upon its hold. B: P, M. (2975)

Dimmock G: Introductory. (Psyche, [22] Jan. 1880, v. 3, p. 7, 25 cm.)

Prospectus of volume 3 of *Psyche*; solicitation of operation.

B: P. M. (2076) cooperation.

Dimmock, G: Note on catogenus rufus. (Psyche. May [19 Aug.] 1882, v. 3. p. 341-342, 30 cm., fig. 7.)

The larva of catogenus rufus found to devour the pupa of elaphidion parallelum; figure of pupa of c. rufus.

B: P. M. (2977)

Dimmock, G: Notes on pterophoridae. (Psyche, Sep.-Oct. 1882 [1 Mar. 1884], v. 3. p. 402-404, 82 cm.)

Citation of original and prominent subsequent de-scriptions of larvae of pterophoridae of North America, with references to published figures of different stages, to notices of food-plants of larvae, to localties of capture, to notices of food-prants or arranges. and to observations made by the author. B: P, M, (2978)

Dimmock, G: Notes on pterophoridae of North America. 2. (Psyche. Nov.-Dec. 1882 [——1885], v. 3, p. 413, 18 cm.) Continuation of author's "Notes on *pterophoridae*" (op. cit., Sep. Oct. 1882 [1 Mar. 1884], p. 402-404.) [Rec., 2978]. G: D. (2979)

Dimmock, G: Notice. (Psyche, [22] Jan. 1880. v. 3. p. 12, 13 cm.)

Prospectus of volume 3 of Psyche; solicitation of B: P. M. (2980) cooperation.

Dimmock, G: Organs, probably defensive in function, in the larva of hyperchiria varia, Walk. : saturnia io, Harris. (Psyche, June [13 Oct.] 1882, v. 3, p. 352-353, 50 cm.) Notice, by Paul Mayer. (Zool. Jahresber. f. 1882, 1883, abtheil. 2, p. 145.)

Description of an evaginable organ upon each side of the fourth and tenth segments posterior to the head of the larva of hyperchiria varia.

B: P. M. (2981)

Dimmock, G: Review. (Psvche, Dec. 1880 [13 May 1881], v. 3, p. 150, 11 cm.) Review of S. Mocquerys' "Teratologic entomologique" [Rec., 2037]. B: P. M. (2082) ...[Rec., 2037].

Dimmock G: Reviews. (Psyche, Feb. [6 Mar.] 1880, v. 3. p. 19. 13 cm.)

Rev. of papers by E. Brandt [Rec., 1451-1458] on the nervous system of insects.

B: P. M. (2983)

Dimmock, G: Reviews. (Psyche, April [28 May] 1880, v. 3, p. 54, 15 cm.)

Abstract. (Amer. entom., Aug. 1880, v. 3. n. s., v. 1, p. 198, 6 cm.)

Review of F. Katter's "Index entomologicus, Pars 1" Review of F. Katter's "Index entonhologicus, Line [Rec., 1610] and of B. Gerhard's "Systematisches Verzeichniss der Macro-lepidopteren von Nord-Amerika" [Bec., 1501]. B: P. M. (2984) Dimmock, G: On some glands which open externally on insects. (Psyche, Sep.-Oct. 1882 [1 March 1884] v. 3, p. 387-401, 493

cm.)

Rew. entitled, "The closed poison glands of caterpillars." (Amer. nat., May [19 Apr.] 1884, v. 18, p. 535.)—Same rev. [with slight typographical changes], entitled, "Poison glands in the skin of the cecropia caterpillar." (op. cit., Oct. [15 Sept.] 1884, v. 18, р. 1046-1047.)

Notice. (Amer. nat., June [17 May]

1884. v. 18, p. 634.)

Notice. (Amer. nat., July [17 June]

1884. v. 18, p. 729.)

Reviews, by G: Balding and J. Anderson, jr., entitled, "Urticating properties of lepidoptera." (Entomologist, Feb. 1885, v. 18, p. 41-45.)

Compiled and original descriptions of the structure and functions of the several classes of glands which open externally in insects; bibliographical list of \$2 titles of articles on this subject.

B: P. M. (2985)

Dimmock, G: Systematic index to Psyche, vol. 3. (Psyche, Nov.-Dec. 1882 [— 1885]. v. 3, p. 431- .) [not seen.]

Index to contents of volume 3 of Psyche, arranged systematically, and with classificational subdivisions numerated according to the Dui decimal system, as developed by B: P. Mann. G: D. (2986)

Dimmock, G: Title slips. (Psyche, Mar. [1 May] 1880, v. 3, p. 44, 28 cm.)

Discussion and history of the title-slip form of bibliographical record, with directions for using the title-slips.

B: P. M. (2987)

Dimmock, G: The trophi and their chitious supports in gracilaria. (Psyche. Aug. [4 Nov.] 1880, v. 3. p. 99-103, 161 cm., fig.

Notice, by Paul Mayer. (Zool. jahresber.

f. 1882, 1883, abtheil. 2, p. 146.)

Describes and figures the mouth-parts and their chitinous supports in gracilaria syringella.

B: P. M. (2988)

Dimmock, G:, secretary, see Cambridge entomological club [Rec., 2955].

Dimmock, G: Monroe. Dimmock's special bibliographies. (Psyche, 1881-1882, v. 3, p. 260, 292, 304, 316, 336, 348, each 6 cm.) Advertisement of Dimmock's special bibliographies,
B: P. M. (2989) nos. 1-3, for sale.

Dose, A. Entomologische Nachrichten, 6. jahrg. 1880. (Psyche, 1880-1882, v. 3, p. 12, 24, 48, 60, 72, 84, 96, 108, 120, 132, 144, 156, 168, 180, 192, 204. each 8 cm.)

Advertisement of Entomologische Nachrichten for subscription, by publisher, with commendatory notice of this magazine, by E. von Harold. B: P. M. (2990)

Dwight, W: Buck. The domestication of papilio thoas [cresphontes] in Dutchess county, N. Y. (Psyche, Mar.-Apr. [24 June] 1882, v. 3, p. 327, 34 cm.)

Larvae of papilio thoas found feeding on dictamnus fraxinella and zanthoxylum americanum about Pough-

keepsie, N. Y.

Edwards, H: Papilio. (Psyche, 1881-1882, v. 3. p. 216, 228, 260, 292, 304, 316, 336, 348, each 3 cm.)

Advertisement of Papilio for subscription.

B: P. M. (2992)

Edwards, W: H: and Wilson, Joseph Martin. Chemical change of coloration in butterflies' wings. (Psyche, July [12

Oct.] 1880, v. 3. p. 87-88, 32 cm.)
Abstract, [by C: V. Riley], entitled, "Chemical change in the color of butterflywings." (Amer. entom., Dec. 1880, v. 3,

n. s., v. I, p. 294, 5 cm.)

Discusses change of color produced by carbolic acid in wings of limenitis arthemis.

Edwards, W: H: Description of the preparatory stages of apatura alicia. (Psyche, Oct. 1880 [12 Feb. 1881], v. 3, p. 123-127, 138 cm.)

Crit. rev., [by C: V. Riley], entitled "Specific value of apatura alicia." (Amer. nat., June [19 May] 1881, v. 15) (RILEY, C: V. Entomology...[June 1881]), p. 487.

Describes egg, stages of larva, and chrysalis of apatura alicia; decides that a. alicia is distinct from a. G: D. (2994)

Edwards, W: H: Effect of cold applied to chrysalids of limenitis disippus. (Psyche, Jan. [27 June] 1881, v. 3, p. 174, 20 cm.)

Changes of color produced in imago of *limenitis* disippus by exposing its chrysalids to cold. G: D. (2995)

Edwards, W: H: Experiments upon the effect of cold applied to chrysalids of butterflies. (Psyche, 1880. v. 3: [22] Jan., p. 3-6, 129 cm.; Feb. [6 Mch.], p. 15-19, 149 cm.; June [13 Aug.], p. 75-76, 39 cm.)

Notice and extract in [C: V. Riley's] "Effects of cold applied to the chrysalides of butterflies" (Amer. entom., May 1880,

v. 3, n. s., v. 1, p. 110-111, 33 cm.)
Abstract of [Riley's] notice, etc., entitled "Ueber die Wirkung der Kälte auf Schmetterlingspuppen." (Entom. Nachrichten. 1

July 1880, jahrg. 6, p. 144.)

Experiments upon the change in coloration of butter-flies which could be brought about by keeping their chrysalids in the cold.

G: D. (2996)

- Edwards, W: II: On the number of molts of butterflies, with some history of the moth callosamia promethea. (Psyche, 1881, v. 3: Jan. [27 June], p. 159-161, 95 cm.; Feb. [14 July], p. 171-174, 107 cm.)
- Discussion of the number of molts and its inconstancy in lepidoptera. G: D. (2997)
- Entomological club of the American association for the advancement of science. (Psyche, Sept. [15 Dec.] 1880, v. 3, p. 114, 27 cm.)
- 27 CIII.)
 Partial report of meetings of Entomological club of A. A. A. S., held at Boston, Mass., 25 and 30 Aug. 1880, consisting of a letter from W: H: Edwards concerning biological observations on lepidoptera, with remarks by A: R. Grote, and a letter from Cyrns Thomas concerning migrations of caloptenus spretus.

 G: D. (2998)
- Entomological items. (Psyche, [22] Jan. 1880, v. 3, p. 11, 7 cm.)
- Entomological items. (Psyche, Feb. [6 Mch.] 1880, v. 3, p. 23, 17 cm.)
- G: D. (3000)

 Entomological items. (Psyche, Mch. [1
- May 1880, v. 3, p. 47, 17 cm.)

 G: D. (3001)
- Entomological items. (Psyche. Apr. [28 May] 1880. v. 3, p. 59, 17 cm.)

 6: D. (3002)
- Entomological items. (Psyche, May [9] July] 1880, v. 3, p. 71, 17 cm.)

 6: D. (3003)
- Entomological items. (Psyche, June [13 Aug.] 1880, v. 3, p. 83, 17 cm.)

 G: D. (3004)
- Entomological items. (Psyche, July [12 Oct.] 1880, v. 3, p. 95, 17 cm.)

 6: D. (3005)
- Entomological items. (Psyche, Aug. [4 Nov.] 1880. v. 3, p. 107, 17 cm.)

 G: D. (3006)
- Entomological items. (Psyche, Sep. [15 Dec.] 1880, v. 3, p. 119, 17 cm.)
- Entomological items. (Psyche, Oct. 1880 [12 Feb. 1881], v. 3, p. 131, 17 cm.) *G: D.* (3008)
- Entomological items. (Psyche, Nov. 1880 [22 Mch. 1881], v. 3, p. 143, 17 cm.)

 G: D. (3009)

- Entomological items. (Psyche, Jan. [27] June] 1881, v. 3, p. 167, 17 cm.)
- Entomological items. (Psyche, Feb. [14 July] 1881, v. 3, p. 179, 16 cm.)
- Entomological items. (Psyche, Mch. [25 July] 1881, v. 3, p. 191, 17 cm.)

 G: D. (3012)
- Entomological items. (Psyche, Apr. [18 Aug.] 1881, v. 3, p. 203, 17 cm.)
- Entomological items. (Psyche, May [4 Nov.] 1881, v. 3, p. 215, 17 cm.)
- Entomological items. (Psyche, June [18 Nov.] 1881. v. 3, p. 227, 17 cm.)

 6: D. (3015)
- Entomological items. (Psyche, Jul.-Sep. 1881 [7 Mch. 1882], v. 3, p. 259, 17 cm.) *G: D.* (3016)
- Entomological items. (Psyche, Oct.-Dec. 1881 [7 Apr. 1882], v. 3, p. 290-291, 51 cm.)
 Includes C: R Osten Sacken's "Habits of bombylius" [Rec., 3077].

 G: D. (3017)
- Entomological items. (Psyche, Jan. [29] Apr.] 1882, v. 3, p. 303, 17 cm.)
- Entomological items. (Psyche, Feb. [24 May] 1882, v. 3, p. 315, 17 cm.)
- **Entomologica**l items. (Psyche, Mch.-Apr. [24 June] 1882, v. 3, p. 335, 17 cm.) *G: D.* (3020)
- Entomological items. (Psyche, May [19] Aug.] 1882, v. 3, p. 347, 17 cm.)

 G: D. (3021)
- Entomological items. (Psyche, June [13 Oct.] 1882, v. 3, p. 359-360, 47 cm.)

 G: D. (3022)
- Entomological items. (Psyche, July [16 Dec.] 1882. v. 3. p. 371-372, 46 cm.)
- Entomological items. (Psyche, Aug. 1882 [15 Jan. 1883], v. 3, p. 383-384, 45 cm.) 6: D. (3024)
- Entomological items. (Psyche, Sep.-Oct. 1882 [1 Mar. 1884], v. 3, p. 407-408, 60 cm.) Includes [C: V. Riley's] "A new museum pest" [Rec., 3083], and J: J. Wier's "Danaine butterflies not subject to the attack of mites" [Rec., 3099].

 G: D. (3025)

Entomological section of the Academy of natural sciences, Philadelphia, Pa. (Psyche, 1880. v. 3: July [12 Oct.], p. 89, 24 cm.; Aug. [4 Nov.], p. 104, 28 cm.)

Alig. [4 AWV.] p. 104, 50 cm.

Minutes of monthly meetings of Entomological section of Academy of natural sciences of Philadelphia, for 1879, made in abstract from "Proceedings of the monthly meetings"... of that section; abstract of communications made; list of officers for 1880.

B: P. M. (3026)

Entomological section of the Boston society of natural history. (Psyche, April [28 May] 1880, v. 3, p. 54. 12 cm.)

Minutes of monthly meetings of Entomological section of Boston society of natural history, Jan.-Mch. 1880, by the secretary (B: P. Mann); abstract of communications made.

B: P. M. (3027)

Entomological society of London. (Psyche, Feb. [6 Mch.] 1880, v. 3, p. 20, 10 cm.)

Partial abstract of communications made at meeting of Entomological society of London, 3 Dec. 1879, extracted from Athenaeum, 27 Dec. 1879, p. 853.

Entomological society of London. (Psyche, Oct.-Dec. 1881 [7 Apr. 1882], v. 3. p. 279,

Partial abstract of communications made at meetings of Entomological society of London, 2 June and 6 Oct. 1880 and 2 Mch. 1881. G: D. (3029)

Entomological society of Ontario-Montreal branch. (Psyche, May [9 July] 1880, v. 3, p. 69, 14 cm.)

Minutes of 7th annual meeting of Montreal branch Minutes of 7th annual meeting of Montreal branch of Entomological society of Ontario, 17 May t880, by the secretary (G: II. Bowles); list of officers elected for the ensuing year, and of papers read during the past year; abstract of annual reports. B: P. M. (3030)

Fernald, C: H: Notes on phoxopteris angulifasciana Zell. Psyche. July [12 Oct.]

1880. v. 3. p. 88. 27 cm.)

Notice, [by C: V. Riley]. entitled "Oviposition in the tortricidae." (Amer. entom., Nov. 1880, v. 3, n. s., v. 1. p. 276, 8 cm.)

Description of eggs and oviposition of phoxopteris angulifasciana; color and habits of larvae,

G: D. (3031)

Review. (Psyche, Oct. Fernald, C: H: 1880 [12 Feb. 1881], v. 3, p. 128, 25 cm.)

Review of T: De Grey's [Lord Walsingham] "Illustrations of typical specimens of ... N. A. tortricidae" [Rec., 1943]. G: D. (3032)

Fernald, C: H: *Tortricidae* wanted. (Psyche. 1880-1882, v. 3, p. 12, 24, 48, 60, 72, 84, 96, 108, 120, 132, 144, 156, 168, 180, 192, 204, 216, 228, 260, 292, 304, 316, 336, 348, 350, 362, 374, 386, each 3 cm.)

Advertisement for specimens of North American tortricidae to be used in the study of this family.

B: P. M. (3033)

Gallagher, W. C. For sale. (Psyche, 1880, v. 3, p. 84, 96, each 2 cm.)

Advertisement of lepidoptera for sale. B: P. M. (3034)

Goodell, Lafayette Washington. Notes on sphingidae. (Psyche, July [16 Dec.] 1882. v. 3, p. 367-368, 30 cm.)

Dates of capture and relative abundance of different species of sphingidae, at Amherst, Mass.

G: D. (3035)

Hagen, Hermann August. On an aquatic sphinx larva. (Psyche, Sept. [15 Dec.] 1880, v. 3, p. 113, 20 cm.) [Rec., 2502.]

Notice. (Zool. Jahresber. f. 1880, 1881. abtheil. 2, p. 293.)

G: D. (3036)

Hagen. Hermann August. Some psocina of the United States. (Psyche, 1881, v. 3: Apr. [18 Aug.], p. 195-196, 64 cm.; May [4 Nov.], p. 207-210, 131 cm.; June [18 Nov.], p. 219-223, 168 cm.: Oct.-Dec. 1881

[7 Apr. 1882], v. 3, p. 291, 5 cm.) Notice, [by C: V. Riley], entitled "Structure of the claw in psocina." (Amer. nat., [3] Dec. 1881, v. 15) (RILEY, C: V. Entomology...[Dec. 1881]), p. 1013-1014. Abstract, by H.A. Hagen. [Zool. Jah-

resber. f. 1881, 1882, abtheil. 2, p. 142-143.) General notes upon the synonymy and anatomy of species of psocus, caecilius, alropos, amphientonum, eli-psocus, mesopsocus, peripsocus, epipsocus, perientonum, syllisis, calopsocus, amphigerontia and lachesilla. G: D. (3037)

Hagen, Hermann August. The yellow fever fly. [Psyche, Sept. [15 Dec.] 1880, v. 3,

p. 111, 28 cm.)

Crit. rev.. by C: V. Riley, entitled "The yellow fever fly." (Amer. nat.. Feb. [25] Jan.] 1881, v. 15) (RILEY, C: V. Entomology... [Feb. 1881]), p. 150.

On a fly, probably a species of *sciara*, once supposed to swarm when yellow fever was epidemic. *G: D.* (3038)

Hayward, Roland, secretary pro tem., see CAM BRIDGE entomological club | Rec. 2954].

Howard, Leland Ossian. Alternate generation in *cynipidae*. (Psyche, Mar.-Apr. [24 June] 1882, v. 3, p. 328-329, 38 cm.)

[24] Julie J. 1602, v. 3, p. 3 Rev. of Jules Lichtenstein's "La génération alternante chez les cynipides, par le Dr. II. Adler"... G: D. (3039)

King, Helen Selina, wife of Valentine Overton. Internal organization of hesperia ethlius Cram., as observed in the living animal. (Psyche, Mar.-Apr. [24 June] 1882. v. 3, p. 322-324, 87 cm.)

Description of the somewhat diaphanous larva of ethlius, and of its internal organs as seen the skin.

G: D. (3040) through the skin.

King, Helen Selina, wife of Valentine Overton. Life history of pleotomus pallens Lec. (Psyche, April [28 May] 1880. v. 3, p. 51-53, 74 cm.)

Biological notes upon pleotomus pallens.
G: D. (3041)

King, Helen Selina, wife of Valentine Overton. Thyridopteryx ephemeraeformis Haworth. Its habits and metamorphosis. (Psyche, July-Sept. 1881 [7 Mar. 1882], v. 3, p. 241-243, 87 cm.)

Biological notes upon thyridopteryx ephemeraefors. G: D. (3042)

Krancher, Oskar Paul. Contribution to the knowledge of sonifaction in insects. (Psyche, July [16 Dec.] 1882, v. 3, p. 363-364, 44 cm.)

Mode of sonifaction of larva of saturnia pyri; a larva of stauropus fagi which had lost a fore leg produced an imago in which the corresponding fore leg was absent; a femule lasiocampa quercifolia deposited 580 fertile eggs in two days.

G: D. (3043)

Krancher, Oskar [Paul]. Lepidoptera and coleoptera. (Psyche, Sep.-Oct. 1882 [1 Mar. 1884], v. 3, p. 408, 3 cm.)

Advertisement of inflated larvae and of lepidoptera d coleoptera of Europe for sale. B: P. M. (3044) and coleoptera of Europe for sale.

Laurent, Philip. Coleoptera and lepidoptera. (Psyche, Feb. [14 July] 1881, v. 3, p. 179, 1 cm.)

Advertisement of coleoptera and lepidoptera for e and exchange. B: P. M. (3045) sale and exchange.

Linnean society of London. (Psyche, May [9 July] 1880, v. 3, p. 69, 14 cm.)

Partial abstract of communications made at meetings Partial abstract of communications made at meetings of Linnean society of London, 5 Feb. 1880 (from Athenaeum, 14 Feb. 1880, p. 220) and 19 Feb. 1880 (from Zool. Anzeiger, 22 Mch. 1880, jahrg. 3, p. 143-144, by J. Murje'); structure of organs in larva of tanyhus maculatus formerly considered respiratory (by A Hammond); habits of pheidole javana and another ant in mining living plants (by James Britten and M. Musters).

Linnean society of London. (Psyche, Dec. 1880 [13 May 1881], v. 3. p. 150, 12 cm.)

1880 [13 May 1881], V. 3. p. 150, 12 cm. Partial abstract of communications made at meeting of Linnens society of London, 17 June 1880 (from Zool. Anzeiger, 23 Aug. 1880, jahrg. 3, p. 431-432, by J. Murie); notes on the structure of maxillary glands and stridulating organs of arancina (by F. M. Campbell); reference to observations on the powers of communication in hymenoptera (by J: Lubbock).

B: P. M. (3047)

Linnean society of London. (Psyche, June [18 Nov.] 1881, v. 3, p. 224, 22 cm.)

Partial abstract of communications made at meeting Partial abstract of communications made at meeting of Linnean society of London, 3 Feb. 1881 (from Zool. Auxeiger, 28 Mch. 1881, jairrg. 4, p. 167-168); observations on the life history of gamasinae (by A. D. Michael).

B: P. M. (3048) Macloskie, G: Pneumatic functions of insects. (Psyche, Aug. 1882 [15 Jan. 1883], v. 3. p. 375-378, 109 cm.)

Describes how air pressed into organs of insects aids in their functions, illustrated in the protrusion of the proboscis of *libellula* and *mnsca*, in the respiration of *libellula*, *psephenus* and *musca*, and in the formation of organs when some insects emerge from the pupal

Mann, B: Pickman, secretary, see Cambridge ento-mological club [Rec. 2945-2951].

Mann, B: Pickman, secretary, see Entomological section of the Boston society of natural history [Rec.,

Mann, B: Pickman, see Meeting (52nd) of German naturalists and physicians in Baden-Baden [Rec., 3065].

[Mann, B: Pickman, ed.] Bibliographical record. (Psyche, 1880-1882, v. 3, p. 8-10, 21-22, 45-46, 55-58, 70, 78-82, 90-94. 105-106, 115-118, 129-130, 139-142, 151-154, 163-166, 176-178, 187-190, 200-202, 212-214, 225-226, 248-258, 280-289, 301-302, 313-314, 330-334, 344-346, 355-358, 370, 382, 405-406, 000-000.)

List of publications on entomology, being no. 1447-3100 of the Bibliographical record of *Psyche*, containing exact titles of and references to and brief analyses of each publication recorded, with occasional explana-

B: P. M. (3050)

Mann, B: Pickman. Blank insect labels. (Psyche, 1880-1882, v. 3, p. 12, 24, 48, 60. 72, 84, 96, 108, 120, 132, each 4 cm., 2 fig.) B: P. M. (3051) Advertisement.

Mann, B: Pickman. Cluster-flies. (Psyche, Aug. t882 [15 Jan. 1883], v. 3, p. 378-379, 33 cm.)

Abundance of *pollenia rudis* and *microdon globosus* hibernating sometimes in houses. G: D. (3052)

Mann, B: Pickman. Entomologists' materials for sale. (Psyche, 1880-1882, v. 3: p. 2, 14, 26, 50, 62, 74, 86, 98, 110, 122, each 10 cm.; p. 134, 146, 158, each 8 cm.; p. 170, 182, 194, 206, 218, 230, 262, each 6 cm.; p. 294, 306, 318, 338, each 5 cm.)

Advertisement, occasionally changed, of insect pins, boxes, cork, glass tubes, rubber stoppers, labels and entomological photographs for sale.

B: P. M. (3053)

Mann, B: Pickman. George Dole Smith. (Psyche, Apr. [18 Aug.] 1881, v. 3. p. 199,

Biographical notice of G: Dole suntan action from a memoir by J: Orne, jr. [See Rec., 2164, 2555.]
G: D. (3054) Biographical notice of G: Dole Smith, abstracted Mann. B: Pickman. In memoriam. (Psvche, Oct. 1880 [12 Feb. 1881], v. 3, p. 128, 4 cm.)

4 Cm.)
Notice of death of Edwin C: Prentiss.

G: D. (3055)

Mann, B: Pickman. Joseph Duncan Putnam. (Psyche, Feb. [24 May] 1882, v. 3, p. 312, 27 cm.)

Biographical sketch of J. D. Putnam. [See Rec., 66.] G: D. (3056)

Mann, B: Pickman. Loan libraries. (Psyche, Jan. [29 Apr.] 1882, v. 3, p. 300, 27

General remarks upon the value of loan libraries, and upon requisites to the success of such libraries, with especial mention of the library of the Cambridge entomological club.

G: D. (3057)

Mann, B: Pickman. Mann's catalogue of plants. (Psyche, 1880-1882, v. 3, p. 144, 156, 168, 180, 192, 204, 216, 228, 260, 292, 304, 316, 336, 348, each 5 cm.)

Advertisement for sale of Horace Mann, jr's "Catalogue of the phaenogamous plants of the United States, east of the Mississippi, and of the vascular cryptogamous plants of North America north of Mexico. 2d ed."

B: P. M. (3058)

Mann, B: Pickman. Promoting locust ravages. (Psyche, Aug. 1882 15 [Jan. 1883], v. 3, p. 379-380, 34 cm.)

Quotes, with introductory remarks, a letter by J: P. Brown, in which the enormous prevalence of caloptenus spretus in Kansas, in 1875, is explained, in part at least, by the destruction of great numbers of game birds.

G: D. (3059)

Mann. B: Pickman. Readers and writers economy co. (Psyche, 1880, v. 3, p. 108, 120, 132, each 3 cm.)

Advertisement. B: P. M. (3060)

Mann, B: Pickman. Records of necrology. (Psvche, Jan. [27 June] 1881, v. 3, p. 175,

Brief notice of the publication of records of necrology in the Bibliographical record of Psyche, with request for contributions to these records.

G: D. (3061)

Mann, B: Pickman. Review. (Psyche, July [12 Oct.] 1880. v. 3, p. 89, 4 cm.) Review of J. P. Ballard's "Insect lives"... [Rec. G: D. (3062)

Mann, B: Pickman. Review. (Psyche, Nov. 1880 [22 Mar. 1881], v. 3, p. 138, 6

Review of S. H. Peabody's "Cecil's books of natural history"...[Rec., 1982].

Mann, B: Pickman. Xylocopa perforating a corolla-tube. (Psyche, Jan. [29 Apr.] 1882, v. 3, p. 298, 10 cm.)

Description of the manner in which a species of xylocopa perforated the corolla-tube of a salver-shaped flower.

Meeting (52nd) of German naturalists and physicians in Baden Baden. (Psyche, May [4 Nov.] 1881, v. 3, p. 211, 27 cm.)

Abstract, in English translation, of M. von Hopfigarten's notice of 52nd meeting of German naturalists and physicians in Baden-Baden, from Entom. Nachrichten, 1 Apr. 1880, jahrg. 6, p. 65-70: notes on the geographical distribution of certain tipnlidae and proposition of the establishment of an entomological loan-library in Germany (by C: R. Osten Sacken); minor communications.

B: P. M. (3065)

Mische, W: For sale. (Psyche, 1880, v. 3, p. 11, 24, 48, 60, each 4 cm.) P. 11, 24, 40, 60,
Advertisement of coleoptera for sale.
B: P. M. (3066)

Moody, H: Loring. Larvae of the family pyrochroidae. (Psyche, June [13 Aug.] 1880, v. 3, p. 76, 23 cm.)

Distinctive characters of larvae of dendroides canadensis, d. concolor, pyrochroa flabellata and schizotus

G: D. (3067)

Moody, H: Loring. Transformations of nacerdes melanura. (Psyche, May 9 [July] 1880, v. 3, p. 68, 19 cm.)

Description of egg of nacerdes melanura; results of experiments to ascertain the food of the larva.

B: P. M. (3068)

Mummy of a wasp. (Psyche, July [16 Dec.] 1882, v. 3, p. 368, 10 cm.)

Note, from Maspero and Brugsch's "La trouvaille de Deir-el-Bahari," on the antiquity of a wasp found in the coffin of Amenophis I who died 1668 B. C.

G: D. (3c69)

Murie, James, see LINNEAN society of London [Rec., 3046-3047].

Murtfeldt, Mary Esther. A fragrant butterfly. (Psyche, Apr. [18 Aug.] 1881, v. 3, p. 198, 12 cm.)

Notice, [by C: V. Riley], entitled "Odor in butterflies." (Amer. nat., Oct. [23 Sep.] 1881. v. 15) (RILEY, C: V. Entomology ...[Oct. 1881]), p. 822.

Notes a delicate violet-like odor in males of callidry as cubule.

Murtfeldt, Mary Esther. The grapeberry moth, endemis botrana, S. V. (Psyche. Oct.-Dec. 1881 [7 Apr. 1882]. v. 3, p. 276, II cm)

The larva of eudemis botrana feeds upon vitis, ver-nonia noveboracensis, liriodendron and amorpha. G: D. (3071)

Murtfeldt, Mary Esther. Habits of hypoprepia packardii, Grote. (Psyche, July-Sept. 1881 [7 Mar. 1882], v. 3, p. 243-244, 46 cm.)

Describes larva of hypoprepia packardii, which feeds on quercus tinctoria.

Xylocopa and Murtfeldt, Mary Esther. megachile cutting flowers. (Psyche, May [19 Aug.] 1882, v. 3, p. 343, 9 cm.)

Flowers of plumbago and of other plants are cut by species of xylocopa and megachile. G: D. (3073)

Noel, Paul. Chasse aux lépidoptères nocturnes [Rec., 1541]. Abstract. (Psyche, Feb. [6 Mch.] 1880, v. 3, p. 23, 4 cm.) G: D. (3074)

Orne, J:, jr., see MANN, B: P. George Dole Smith [Rec., 3754].

Osborn, Herbert. Habits of thrips. (Psyche, July [16 Dec.] 1882, v. 3, p. 369, 12

Crit. rev., by T. Pergande, with same title. (Psyche, Aug. 1882 [15 Jan. 1883], v. 3, p. 381, 20 cm.)

Regards a species of *phlocothrips* as injuring apple-blossoms by biting into the young styles and thus preventing fertilization.

G: D. (3075)

Osten Sacken, C: Robert. Ants and aphides. (Psyche, May [19 Aug.] 1882, v. 3, p. 343, 14 cm.)

Notice of W: Trelease's "Unusual care of ants for aphides" (Psyche, Feb. [24 May] 1882, v. 3, p. 310-311) [Rec., 305], together with a translation of a note on this subject published earlier by the author (Entom. Zeitung . . . zu Stettin, 1862, jahrg. 23, p. 127-128). G: D. (3076)

Osten Sacken, C: Robert. Habits of bombylins [Rec., 3520].

Reprint, with same title. (Psyche, Oct.-Dec. 1881 [7 Apr. 1882]. v. 3, p. 290, 17 B: P. M. (3077)

Osten Sacken, C: Robert. Note on North American trypetidae. (Psyche, April [28 May] 1880, v. 3. p. 53, 21 cm.)

Notes on the 6 species of N. A. trypeta of which the od-plant is known.

G: D. (3078) food-plant is known.

Parker, H: Webster. Note on deilephila lineata, Fabr. (Psyche, May [19 Aug.] 1882, v. 3, p. 342, 12 cm.)

Habits and occurrence of imagos of deilephila lineata, G: D. (3079)

Pergande, Theodor. Habits of thrips. (Psyche, Aug. 1882 [15 Jan. 1883], v. 3, p. 381. 20 cm.)

Critical review of H. Osborn's "Habits of thrips" (Psyche, July [16 Dec.] 1882, v. 3, p. 369) [Rec., 3075], with other notes on species of thrips. G: D. (3080)

Proceedings of societies, see the names of the respective

Reed, Edmund Baynes. Canadian entomologist. (Psyche. 1881-1882, v. 3, p. 216, 228, 260, 292, 304, 316, 336, 348, each 3 cm.) Advertisement of Canadian entomologist and of Annu-Advertisement of Camarian Statistics of Ontario for subscription.

B: P. M. (3081)

Riley, C: Valentine. Galls and gall insects. (Psyche, 1880-1882, v. 3, p. 11, 24, 48, 60, 72, 84, 96, 108, 170, 182, 194, 206, 218, 230, 262, 294, 306, 318, 338, 350, 362, 374, 386, each 3 or 4 cm.)

Advertisement for galls and gall insects.

B: P. M. (3082)

[Riley, C: Valentine.] A new museum pest. (Amer. nat., Oct. [28 Sep.] 1882, v. 16) (RILEY, C: V. Entomology...[Oct. 1882]), p. 826.

Reprint, with same title. (Psyche, Sep.-Oct. 1882 [1 Mar. 1884], v. 3. p. 408, 6 cm.) Discovery, by Mrs. A. E. Bush, of perimegatoma vari-egatum as a pest in collections of insects. B; P. M. (3083)

[Schaupp, Frank G:] Bulletin of the Brooklyn entomological society. (Psyche, 1881-1882, v. 3, p. 216, 228, 260, 292, 304, 316, 336, 348, each 3 cm.)

Advertisement of Bulletin of the Brooklyn entonio-orical society for subscription. B: P. M. (3084) logical society for subscription.

Sclater, Philip Lutley, see Zoological society of London [Rec., 3100].

Scudder, S: Hubbard. Early stages of butterflies wanted. (Psyche, 1880-1882, v.3, p. 2, 14, 26, 50, 62, 74, 86, 98, 110, 122, 134, 146, 158, 170, 182, 194, 206, 218, 230, 262, 294, 306, 318. 338, 350, 362, 374, 386. each 4 cm.)

Advertisement. B: P. M. (3085)

Scudder, S: Hubbard. Fragments of the coarser anatomy of diurnal lepidoptera. (Psyche, v. 3: Oct.-Dec. 1881 [7 Apr. 1882], p. 263-275, 443 cm.; Jan. [29 Apr.] 1882, p. 295-298, 125 cm.; Feb. [24 May] 307-309, 94 cm.; Mar.-Apr. [24 June] 1882. p. 319-321. 101 cm.)
Reprint, with same title. Cambridge,

1882. t.-p. cover, t.-p. [+ 1] + 83 p., 19.5

X 12.5, t 10 X 6.

Notice. by G: Dimmock, entitled "Book notice." (Psyche, June [13 Oct.] 1882, v. 3, p. 354.) [Rec., 2968.]

Notice. (Nature. 3 Aug. 1882. v. 26, p. 330-331, 2 cm.)

Notice. (Zool. Jahresber. f. 1882, 1883, abtheil. 2, p. 145.)

Anatomy of the different systems of internal organs in larvae and pupae of some species of diurnal lepidoptera.

G: D. (3086)

Scudder, S: Hubbard. Gosse's observations on the butterflies of North America. (Psyche, July.-Sept. 1881 [7 Mar. 1882], v. 3, p. 245-247, 77 cm.)

Review of H: Gosse's "The Canadian naturalist"...Lond., 1840 [Rec., 2500], and of his "Letters from Alabana"...Lond., 1859 [Rec., 2501], with annotated index of the species of rhopalocera mentioned in the two works.

G: D. (3087)

Scudder, S: Hubbard. Homologies of the cremaster. (Psyche, Mar. [25 July] 1881, v. 3, p. 186, 10 cm.)

Defends the view "that the body of the cremaster of the chrysalis corresponds to the anal plate (or terminal segment) of the caterpillar."

G. D. (3088)

Scudder, S: Hubbard. Some recent publications on fossil insects. (Psyche. Nov. 1880 [22 Mar. 1881], v. 3, p. 138, 23 cm.)

Reviews Herbert Goss' "Three papers on fossil insects" . . . (Proc. Geologists' assoc., Lond., 1878-1880, v. 5-6) and "The geological antiquity of insects" . . . Lond. 1880, by the same author. G: D. (3089)

Snow, Francis Huntington. Larva of eurycreon rantalis Guen. (Psyche, Oct. 1880, [12 Feb. 1881], v. 3, p. 127, 23 cm.)

Describes the larva of *curycreon rantalis*, and gives list of its six known food-plants. G: D. (3000)

Snow, Francis Huntington. Musca domestica Linn. versus vespa occidentalis Cresson. (Psyche, May [19 Aug.] 1882, v. 3, p. 339, 31 cm.)

Notice. (Zool. jahresbericht., 1882, 1883, abtheil. 2, p. 327, 379.)

Notice of great destruction of musca domestica by vespa occidentalis.

G: D. (3091)

Snow, Francis Huntington. A new museum pest, trogoderma tarsale Mels. (Psyche, June [13 Oct.] 1882, v. 3, p. 351-352, 37 cm.)

Describes larva and pupa of trogoderma tarsale, which is common in Kansas, as a museum pest. G:D. (3092)

Society meetings. (Psyche, 1880-1882, v. 3, p. 11, 23, 47, 59, 71, 83, 95, 107, 119, 131, 143, 167, 179, 191, 203, 215, 227, 259, 291, 303, 315, 335, 347, 360, 372, 384.)

Current announcements, with occasional changes, of the times of meeting of the different entomological societies of North America.

G: D. (3093)

Stebbins, Solomon. North American ferns. (Psyche, 1880-1882, v. 3, p. 11, 24, 144, 156, 168, 180, 192, 204, 216, 228, 260, 292, 304, 316, 336, 348, 350, 362, 374, 386, each 3 cm.) Advertisement of check-lists of the ferns [filices]. B. P. M. (3094)

Trelease, W:, secretary, see Cambridge entomological club [Rec., 2951-2953].

Trelease, W: Review. (Psyche, Jan. [27 June] 1881, v. 3, p. 175, 25 cm.) [Rec., 2738].

Trelease, W: Unusual care of ants for aphides. (Psyche, Feb. [24 May] 1882, y, 2, p, 210-211, 67 cm.)

v. 3, p. 310-311, 67 cm.)
Notice, by C: R. Osten Sacken, entitled "Ants and aphides." (Psyche, May [19 Aug.] 1882, v. 3, p. 343, 14 cm.)

Crematogaster lineolata erects a shelter to protect aphides. G: D. (3095)

Turner, H: Ward. Color of the light emitted by insects. (Psyche, Feb. [24 May] 1882, v. 3, p. 309, 9 cm.)

Color of light emitted by pyrophorus noctilucus, photuris pensylvanica and photinus pyralis.

G: D. (3096)

Wailly, Alfred. Lepidoptera. (Psyche, 1880-1882, v. 3, p. 12, 24, 48, 60, 72, 84, 96, 108, 120, 132, 144, 156, 168, 180, 192, 204, 216, 228, 260, 292, 304, 316, 336, 348, 350, 362, 374, 386, each 3 cm.)

Advertisement for living pupae and eggs of American lepidoptera wanted.

B: P. M. (3097)

Wailly, Alfred. Notes on a few American bombyces. (Can. entom., Nov. 1880. v. 12, p. 227-228.)

Duplicate article [slightly different], entitled "Notes on a few bombyces, hybrids, etc." (Psyche, Sept. [15 Dec.] 1880, v. 3, p. 112-113, 48 cm.)

Notes on species of the genus attacus and their hybrids.

G: D. (3098)

Wier, J: Jenner. Danaine butterflies not subject to the attack of mites. (Entomologist, July 1882. v. 15, p. 160-161.) Reprint, with same title. (Psyche, Sep.-

Reprint, with same title. (Psyche, Sep.-Oct. 1882 [1 Mar. 1884], v. 3, p. 408, 12

cm.

Review of remarks by R. Meldola on the exemption of papilio panmon and species of enplose and danais from injury by mites [psocidae] in collections; confirmation of this exemption in author's experience.

B: P. M. (3099)

Wilson, Joseph Martin, see Edwards, W: H: and Wilson, J. M. Chemical change . . . [Rec., 2993].

Zoological society of London. (Psyche, June [18 Nov.] 1881, v. 3. p. 224, 5 cm.)

Extract from minutes of meeting of Zoological society of London, 15 Feb. 1881, published in Zoologischer Anzeiger, 7 Mch. 1881, jahrg. 4, p. 117-118, by P. L. Sclater; remarks on a hymenopterous parasite of two species of linyphia (by O. P. Cambridge); reference to a paper read by T: De Gray (Lord Walsingham) on North American tineidae.

B: P. M. (3100)